

Amendments to the Specification:

Please amend the paragraph at page 10, line 5, as follows:

With reference now to Fig. 2, a block diagram of a resource allocation system 100 of one embodiment of the present invention is described. The resource allocation system 100 includes two services, service A 104 and service B 108. Service A 104 has an associated queue 112, and service B 108 has an associated queue 116. Work 120 enters the system 100, and is routed to the appropriate service. For example, service A 104 may receive electronic mail, and service B 108 may receive telephone calls. The queue 112 for service A 104 contains a number of work items 124, and similarly, the queue 116 for service B 108 contains a number of work items 128. Work items 124 are associated with, in this embodiment, electronic mail, and the system 100 computes a service time for the servicing of the electronic mail. The service time may be, for example, one business day. One business day for the resources in service A 104 may be eight business hours, resulting in a service time for work items in queue 112 of eight business hours or less. Work items 128 are associated with, in this embodiment, telephone calls, and the system 100 computes a service time for the servicing of the telephone calls. The service time may be, for example, three minutes (180 seconds). As will be understood, the service time for telephone calls must be done in real time, as a person making the telephone call may become dissatisfied if the call is not answered within a certain time period. Accordingly, all items in the queue 116 associated with service B 108 must be completed in real time, and not business time. As used herein, "real time" refers to a service time determined without respect to business and non-business time periods while "business time" refers to a service time determined with respect to business and non-business time periods.

Please amend the paragraph at page 11, line 9, as follows:

In order to employ resource allocation algorithms which the system can use in resource allocation, one embodiment of the present invention employs a calendar which is used to determine the amount of real time and amount of business time for a work item. Referring to Fig. 3, a block diagram of a calendar 150 is now described. The calendar 150 includes period information 154, which has start-end information 158 noting the entire time period of the calendar 150. The start-end information may be, for example, the beginning and end dates for a fiscal year for a company. The start-end information 158 may span any desired time period, such as a longer time period of several years, or a shorter time period such as a week or a month. The

calendar 150 also includes time period information 162, which has associated time range information 166. The time period information 162 includes information which indicates whether a business is open or closed, and the time range information 166 includes information indicating the time range for each time period information 162. As illustrated in Fig. 3, the calendar 150 includes three time period information 162 entries. It will be understood that any number of time period information 162 entries may be present. Furthermore, the calendar 150 may have a default business time, with only exceptions included which indicate if the business is open or closed. For example, a default calendar may have a business being open from 9:00 AM to 5:00 PM on Mondays through Fridays. Additional time period information 162 may then be entered to indicate, for example, a holiday where the business is not open on the holiday, or has reduced hours on the holiday. A number of different alternatives exist for the entry of calendar information, including different default calendars, entry of recurring information, and changing of hours, which will be readily apparent to one of skill in the art. The calendar 150 is stored in the system using any known method of information storage.

The following amendments are made in lieu of the amendments to the specification set forth in the Amendment and Response, which responds to the Office Action having a mailing date of April 8, 2008. It is not believed that the earlier specification amendments were entered as a result of various objections by the Examiner.

Please amend the paragraph at page 15, line 3, as follows:

Referring now to Fig. 6, a table illustrating the conversion from real time to business time is now described. In one embodiment, the scheduler creates a table 340 which indexes a ~~calendar to real time~~ index to an equivalent business time index. The table 340 includes real time entries or indices 350, and business time entries or indices 354 for ~~the appropriate a selected calendar, such as the calendar of Fig. 3.~~ In the example illustrated in Fig. 6, the ~~calendar~~ table 340 for the business time entries 354 includes a first non-business time period 358, and a second non-business time period 362. The first and second non-business time periods 358, 362, are each three real time units in duration. The units may be any length of time, such as one minute, ten minutes, or 30 minutes, for example. It will be understood that the table illustrated in Fig. 6 is an illustration for discussion purposes only, and that any calendar may be indexed with real time using such a table.

In order to determine the real time at which a certain calendar event~~event~~ will occur, an index is, as discussed below, derived from the real time value. The~~[[the]]~~ appropriate position of the index is located and the respective business time index determined. For example, a time interval can be determined (see step 412) by adding, to the determined business time index, a business time remainder.

A table similar to that shown in Fig. 6 can be used to convert from a business time entry~~entry~~ or index 354 is located, and the~~to~~ a corresponding real time entry or index 350 is obtained.

For example, if the units in the table 340 correspond to 30 minute time intervals, and a work item is to be completed in ~~[[five]]~~four business hours, the corresponding entry in the business time entries 354 would be 10. The corresponding entry in the real time entries 350 would be 14, which accounts for the first and second non-business time periods 358, 362. The work item is entered onto the appropriate delta queue which is associated with the calendar, and all of the algorithms in the resource allocation system continue to operate on the delta queue with no additional modification required.

Please amend the paragraph beginning at page 16, line 1, as follows:

The table 340 illustrated in Fig. 6 is one of many ways to index and map between real time and business time. As will be understood, creating such a table for each calendar in a resource allocation system may require a relatively large amount of system resources, particularly if the time intervals are relatively small and if the calendar covers an extended period of time. In order to more efficiently use system resources, in one embodiment, the resource allocation system uses an algorithm to convert from real time to business time, and business time to real time.

The operational steps for performing the algorithm for this embodiment are illustrated in the flow chart diagram of Fig. 7. The real time to business time computation initiates at block 400. At block 404, the scheduler selects the calendar for business time which is to be used in the calculation. The business time calendar, as described above, may be one of many calendars stored within the resource allocation system. Next, at block 408, ~~[[an]]~~ a real time index is created into a real time to business time table and/or a business time index is created into a business time to real time table, such as the table shown in Fig. 6. In one embodiment, a minimum time interval is selected, which indicates the granularity of the selected calendar(s).

For example, one minute time intervals may be selected, resulting in a business time calendar which may have scheduled off-time intervals with one minute granularity. A calendar time is calculated by determining the calendar start time, and subtracting from the selected real time. The index is then determined by taking the modulus of the calendar time by the minimum interval.

After determining the index, a time interval may be computed, according to block 412. The time interval may be computed using the table of Fig. 6. The time interval may be computed by determining a business time remainder, which is the calendar time less the business time at the appropriate index in the business time real time table. The business time may then be computed as the sum of the business time index and the business time remainder.

As mentioned above, the conversion from business time to real time is necessary for the user interface. The resource management algorithms operate using the delta queues, and the scheduler accounts for the non-business-time by inserting the appropriate off-time at the head of the delta queue for a particular calendar. If a business time to real time conversion is desired, a binary search of the business time to real time table 340 may be performed to determine the real time associated with a particular business time. In the case that the real time corresponds to a non-business time, a range may be given, indicating the beginning or end of the non-business time period, or the beginning or end of the non-business time may be selected for display.